

December 2010, Number 221

## SOME ISSUES ASSOCIATED WITH INCREASING GEORGIA'S CIGARETTE TAX

In 2003, the Fiscal Research Center published *The Economics of Cigarette Taxation: Lessons for Georgia*, which provided an extensive discussion of an increase in the tax on cigarettes.<sup>1</sup> While much of what is contained in that report is still relevant, this Policy Memorandum provides an update of that report. The report considered the tax on cigarettes only, and did not discuss cigars, smokeless tobacco, or loose tobacco.

### A Comparison of Current Tax Rates<sup>2</sup>

Georgia currently imposes a tax of 37 cents per pack on cigarettes, a rate first imposed in 2003. State tax rates range from a low of 3 cents per pack in Virginia to a high of \$4.35 in New York. New York City imposes a tax, so that the total state and local tax in New York City is \$5.85. The median state tax is \$1.339 per pack.

The cigarette tax rates in states that border Georgia are:

Alabama	\$0.425
Florida	\$1.339
Georgia	\$0.37
North Carolina	\$0.45
South Carolina	\$0.57
Tennessee	\$0.62

All of the border states have cigarette tax rates that are greater than Georgia's.

### Revenue Estimate

In this section we provide an estimate of the revenue from a \$1.00 increase in the tax on cigarettes, which would put Georgia's cigarette tax just above the national median of \$1.36 per pack and below the national average of \$1.45 per pack. The Campaign for Tobacco-Free Kids estimates that in FY 2009, there were 569.2 million packs of cigarettes sold in Georgia. Based on cigarette tax revenue, we estimate that there were 543.0 million packs of cigarette sold in FY 2009 and 525.7 million in FY 2010. We use our estimate. If a \$1 per pack tax was imposed, and if there was no behavioral response, the additional revenue in FY 2010 would have been \$525.7 million. But there will be behavioral responses, in particular, individuals will reduce the amount they smoke and there will be increased cross border shopping and illegal sales that avoid the tax altogether.

In recent years cigarette consumption has been declining in Georgia. Excise tax revenues from cigarettes fell 5.7 percent in FY 2009 and 3.3 percent in FY 2010. Part of this decline is related to the federal cigarette excise tax increase that took effect in April 2009. Over the last 4 fiscal years, cigarette consumption has declined approximately 4 percent per year. Tax revenues on smokeless and loose

tobacco products grew slowly from FY 2005 through FY 2008 but then fell in FY 2009.

There are two ways of incorporating behavioral responses. One is to use the revenue elasticity, i.e., the percentage change in revenue divided by the percentage change in the tax rate. In the previously referenced FRC report, revenue elasticities of between 0.6 and 0.85 were suggested based on tax changes in other states. Effective July 2003, Georgia increased its cigarette tax rate from 12 cents to 37 cents per pack, a 2.08 percent increase. The state also doubled the tax rate on cigars, and added taxes on smokeless and loose tobacco. Revenue by product is not available for FY 2003 and FY 2004, so we could not calculate the revenue elasticity for Georgia for that change. However, the change in total revenue suggests that the elasticity would be at the lower end of the range.

Using the range of 0.6 to 0.85, we estimate that increasing the tax rate by \$1.00 would increase revenue by between \$315.4 million and \$446.8 million.

The second approach is to use the elasticity of demand to predict the change in the volume of cigarettes purchased. There are many published estimates of price elasticity, but the estimates generally fall within a range of -0.43 to -0.56. More recent published estimates of price elasticity are even smaller, some as low as -0.3. A \$1.00 tax would increase the average retail price of a pack of cigarettes in Georgia to \$5.44, a 22.5 percent increase. This assumes that the entire tax is passed on to the consumer, an assumption consistent with various studies of tax incidence. The result is an estimated increase in revenue of between \$451.1 million and \$434.9 million.

In March 2010, a fiscal note on a proposed increase in the cigarette tax of \$1.00 and an increase in the tax on smokeless and loose tobacco from the current 10 percent to 25 percent was published. The analysis assumed a price elasticity of between -0.6 and -1.0 and a time trend decline of 4 percent in cigarette smoking. The greater elasticities were used to account for both reductions in smoking and tax avoidance behavior. The estimated additional revenue is between \$354.7 million and \$406 million.

Georgia also imposes a sales tax on the price of cigarettes less the state cigarette tax. Increasing the cigarette tax will reduce the number of packs of cigarettes that will be sold, thus reducing sales tax revenue. Using the two price elasticities, -0.46 and -0.56, we estimate the loss of sales tax revenue of between \$9 and \$11 million.

This analysis suggests that the increase in net revenue from an increase in the tax on cigarettes of \$1.00 per pack will be between \$304.6 and \$442.3 million, although we believe the actual revenue generated will be closer to the lower number.

In addition, suppose that the taxes on cigars, loose tobacco and smokeless tobacco were increased by the same percentage as the tax on cigarettes, that is, by 294 percent. Assuming that the revenue from the tax on these products increased by the same percentage as for cigarettes, the estimated increase in revenue is between \$50.1 million and \$72.8 million.

As an alternative, we also considered the revenue effect of increasing the cigarette tax by 0.63 cents per pack to \$1.00 per pack. Using the same procedures, we estimate the increase in revenue on cigarettes would range from \$191.9 million to \$291.4 million. The estimated additional revenue from cigars, loose tobacco, and smokeless tobacco would be between \$31.6 million and \$47.9 million. Again, we believe that the actual revenue generated would be closer to the lower numbers.

### **Effect on Social Costs**

One of the justifications of an increase in tobacco taxes is the substantial health care cost borne by taxpayers due to smoking related illnesses. This is discussed in the aforementioned FRC report, and will not be repeated here. But we do discuss some of the limitations of the estimates.

It has been pointed out that since smoking reduces life expectancy, the early death reduces government expenditures on such programs as Social Security and Medicare. Estimates are that these avoided costs are close to the estimated health care costs. However, the state does not benefit from any saving on Social Security or Medicare costs. Furthermore, arguing that these reduced benefits are a justification for not encouraging reduced smoking is the same as suggesting that we not worry so much about saving a 5-year old's life since we wouldn't have to pay the cost of the public school if the child died.

It has also been suggested that the estimate of health care cost due to smoking related illness does not include many other costs. For example, these estimates do not include public health care costs associated with smoking induced lung cancer, neonatal care for smoking-related low-birth-weight babies, fetal deaths due to smoking, smoking related fires, heart disease deaths due to smoking, and smoking-induced respiratory tract infections and asthma. Chaloupka and Warner conclude that, "All told, the social costs per pack could easily mount toward several dollars if all of the health hazards associated with environmental tobacco smoke are real."<sup>3</sup>

## Border Effects

One of the concerns about raising the tax on cigarettes is the increase in cross-border shopping and the loss of jobs among Georgia convenience stores along the state border. No doubt there will be cross-border shopping for cigarettes if Georgia increased the tax by \$1.00. The question is, how big might the cross border shopping effect be?

One measure is to consider the magnitude of the population that might engage in cross-border shopping. To do that, we calculated the total population in Georgia counties that border other states. We found that 21 percent of the state's population is in these counties, and 17.5 percent is in counties that border a state other than Florida. (If Georgia increased its tax by \$1.00 per pack, it would be about equal to Florida's tax on cigarettes.) We also estimated the number of adult smokers who live in border counties.<sup>4</sup> We estimate that there are a total of 267,430 adult smokers in Georgia border counties and 222,479 in non-Florida border Georgia counties.

We also studied the change in employment among convenience stores between 2003 when the tax on cigarettes was \$0.12, and 2004 when the tax was \$0.37 per pack. Employment in convenience stores increased by 651, or 9.20 percent, in border counties between 2003 and 2004.<sup>5</sup> For the rest of the state the number of employees in convenience stores increased by 9.55 percent. If the border counties had increased at this rate, there would have been 24 additional employees in convenience stores in border counties. This is a measure of the employment loss in convenience stores due to the increase in the tax on cigarettes.

However, when we factor in changes in population, as a crude measure of the increase in demand, we find that convenience store employment per capita in non-border counties decreased from 2.76 to 2.47. For border counties, convenience store employment per capita actually increased from 3.66 to 3.95. These numbers suggest that the increase in cigarette tax did not result in a loss of employment among convenience stores in border counties.

Florida increased its cigarette tax by \$1.00 in July 2009. If border effects were important, we should have seen a positive effect on Georgia's tobacco tax revenue and convenience store employment along the border with Florida. Data are not yet available to consider the effect of this tax increase on convenience store employment in Georgia. Tobacco tax revenue actually fell 1.2 percent in 2010 over 2009. But, there are many other factors that might explain that change, including the general decrease in tobacco consumption and changes in economic conditions.

## Notes:

1. Bruce A Seaman (2003). "The Economics of Cigarette Taxation: Lessons for Georgia". FRC Report #89.
2. Cigarette tax rates are as reported by the Campaign for Tobacco-Free Kids (August 3, 2010), available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>.
3. Frank J. Chaloupka and Kenneth E. Warner (1999). "The Economics of Smoking." NBER Working Paper #7047, p. 27.
4. We used the smoking rate for Georgia reported by Campaign for Tobacco-Free Kids, available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0099.pdf> (accessed September 20, 2010)
5. Employment data is from *County Business Patterns* available from the U.S. Bureau of the Census.

## ABOUT THE AUTHOR

**David L. Sjoquist** is Professor of Economics, holder of the Dan E. Sweat Distinguished Scholar Chair in Educational and Community Policy, and Director of the Fiscal Research Center of the Andrew Young School of Policy Studies at Georgia State University. He has published widely on topics related to state and local public finance and urban economics. He holds a Ph.D from the University of Minnesota.

## ABOUT FRC

The Fiscal Research Center provides nonpartisan research, technical assistance, and education in the evaluation and design the state and local fiscal and economic policy, including both tax and expenditure issues. The Center's mission is to promote development of sound public policy and public understanding of issues of concern to state and local governments.

The Fiscal Research Center (FRC) was established in 1995 in order to provide a stronger research foundation for setting fiscal policy for state and local governments and for better-informed decision making. The FRC, one of several

prominent policy research centers and academic departments housed in the School of Policy Studies, has a full-time staff and affiliated faculty from throughout Georgia State University and elsewhere who lead the research efforts in many organized projects.

The FRC maintains a position of neutrality on public policy issues in order to safeguard the academic freedom of authors. Thus, interpretations or conclusions in FRC publications should be understood to be solely those of the author. For more information on the Fiscal Research Center, call 404-413-0249.

## RECENT PUBLICATIONS

*Some Issues Associated with Increasing Georgia's Cigarette Tax.* This policy brief provides revenue estimates for an increase in tobacco taxes, discusses social cost of smoking, and explores the effect on convenience store employment from increases in tobacco taxes. (December 2010)

*Georgia's Fuel Tax.* This policy brief presents revenue estimates from an increase of fuel taxes. (December 2010)

*Latino Immigration and the Low-Skill Urban Labor Market in Atlanta.* This report examines the dynamic competition between Latino immigrants and black workers in Atlanta's low-skilled urban labor market from 1990 to 2008. (December 2010)

*Georgia's Individual Income Tax: Options for Reform.* This report analyzes the current structure of Georgia's individual income tax and provides analysis of a variety of reform options. (December 2010)

*A Review of State Revenue Actions, 1999-2010.* This report examines tax and other revenue changes enacted by the states since 1999 with particular focus on Georgia's Southeast and AAA-rated peers, and how states have dealt with budget gaps in two post-recession periods. (November 2010)

*A Review of State Tax Reform Efforts.* This report reviews the work of 18 state tax commissions, special committees or task forces that have been convened to comprehensively review a state's tax code and summarizes common themes from their final proposals. (November 2010)

*Informing Lottery Budget Decisions: HOPE and Pre-K.* This report addresses how different allocations of lottery revenue between the Pre-K and HOPE programs might affect the achievement of the objectives of these two programs. (October 2010)

*The Georgia Premium Tax: Options for Reform.* This brief examines the basic structure of Georgia's insurance premium tax and the revenue impact of a number of potential reform options. (October 2010)

*Why Was The 2007 and 2009 Employment Loss in Georgia So Large?* This brief investigates the employment loss in Georgia during the recent recession (2007-2009) and suggests three sources from which the loss comes--national growth trend, local industry mix and local competitive effects. (October 2010)

*An Analysis of Water Related Infrastructure Spending in Georgia.* This report examines the effects of past Georgia state and local government infrastructure investments and conservation policies on water quality and quantity and explores the necessary infrastructure investment to maintain future water quality and quantity. (September 2010)

*Transit Infrastructure, Is Georgia Doing Enough?* This report is the first of a series on Georgia's public infrastructure and focuses on transit infrastructure in the Atlanta region. (September 2010)

*HB 480 – Eliminating the Motor Vehicle Property Tax: Estimating Procedure, Revenue Effects, and Distributional Implications.* This report reviews the revenue estimates and distributional consequences of HB 480 legislation to replace the motor vehicle sales and property tax with a title fee. (August 2010)

*Estimating Georgia's Structural Budget Deficit.* This report examines whether the state of Georgia faces a structural deficit and concludes that it does. The deficit will total approximately \$1.8 billion in fiscal year 2012, and the state will need to make systemic structural changes to bring its revenues and expenditures back into alignment over the long term. (July 2010)

*Revenue from a Regional Transportation Sales Tax.* This brief calculates the revenue for 2009 generated by a one percent sales tax for each of the 12 Regional Commission areas. (June 2010)

*The Magnitude and Distribution of Georgia's Low Income Tax Credit.* This brief presents the distribution by income level of the low income tax credit. (June 2010)

*Effect of Change in Apportionment Formula on Georgia Corporate Tax Liability.* This brief analyzes the effect of the change in the apportionment formula on firm's apportionment ratio and tax liability. (December 2009)

*An Analysis of the Relative Decline in Employment Income in Georgia.* This report explores the declining rate of per capita income and employment income per job in Georgia. (December 2009)

*Georgia Per Capita Income: Identifying the Factors Contributing to the Growing Income Gap.* This report analyzes the factors contributing to the slow growth of Georgia's per capita income, relative to the nation, since 1996. (December 2009)

*Historic Trends in the Level of Georgia's State and Local Taxes.* This report explores long term trends in Georgia's state and local taxation including taxes as a percentage of personal income, reliance on taxes (as compared to fees, grants, etc) for revenue, the changing balance between income taxes, sales taxes, and other taxes, and other trends. (December 2009)

*Current Charges and Miscellaneous General Revenue: A Comparative Analysis of Georgia and Selected States.* This report examines Georgia's current charges and miscellaneous general revenue compared to the AAA bond rated states, the Southeastern neighbor states, and the U.S. average for fiscal years 2007 and 1992. (December 2009)

*Comparing Georgia's Fiscal Policies to Regional and National Peers.* This report analyzes the major components of Georgia's state and local revenue and expenditure mixes relative to its peer states. (December 2009)

*Recent Changes in State and Local Funding for Education in Georgia.* This report examines how the 2001 recession affected K-12 education spending in Georgia school systems. (September 2009)

*Household Income Inequality in Georgia, 1980 – 2007.* This brief explores the change in the distribution of income. (September 2009)

*Household Tax Burden Effects from Replacing Ad Valorem Taxes with Additional Sales Tax Levies.* This brief estimates net tax effects across income classes from a sales tax for property tax swap; where Georgia property taxes are reduced and state sales taxes increased. (August 2009)

*An Examination of the Financial Health of Georgia's Start-Up Charter Schools.* This brief examines the financial health of start-up charter schools in Georgia during the 2006-07 school year. (July 2009)

*Corporate Tax Revenue Buoyancy.* This brief analyzes the growth pattern of the Georgia corporate income tax over time and the factors that have influenced this growth. (July 2009)

*The Value of Homestead Exemptions in Georgia.* This brief estimates the total property tax savings, state-wide, to homeowners arising from homestead exemptions: examples and descriptions are provided. (March 2009)

For a free copy of any of the publications listed, call the Fiscal Research Center at 404/413-0249, or fax us at 404/413-0248. All reports are available on our webpage at: [frc.gsu.edu](http://frc.gsu.edu).